

8. CYLINDER HEAD/VALVES

SERVICE INFORMATION	8-1	VALVE GUIDE REPLACEMENT	8-13
TROUBLESHOOTING	8-3	VALVE SEAT INSPECTION AND REFACING	8-14
CYLINDER COMPRESSION	8-4	CYLINDER HEAD ASSEMBLY	8-17
CYLINDER HEAD COVER REMOVAL	8-4	CYLINDER HEAD INSTALLATION	8-19
CYLINDER HEAD COVER DISASSEMBLY	8-6	CAMSHAFT INSTALLATION	8-19
CAMSHAFT REMOVAL	8-7	CYLINDER HEAD COVER ASSEMBLY	8-22
CYLINDER HEAD REMOVAL	8-10	CYLINDER HEAD COVER INSTALLATION	8-23
CYLINDER HEAD DISASSEMBLY	8-11		

SERVICE INFORMATION

GENERAL

- This section covers maintenance of the cylinder head, valves and camshaft. These services can be done with the engine installed in the frame.
- When disassembling, mark and store the disassembled parts to ensure that they are reinstalled in their original locations.
- Clean all disassembled parts with cleaning solvent and dry them by blowing them off with compressed air before inspection.
- Be careful not to damage the mating surfaces when removing the cylinder head cover and cylinder head.

SPECIFICATIONS

Unit: mm (in)

ITEM		STANDARD	SERVICE LIMIT	
Decompressor lever free play		5.0–8.0 mm (3/16–5/16 in)	—	
Cylinder compression	Valve clearance at standard (decompressor applied)	600 kPa (6.12 kgf/cm ² , 87 psi) at 400 min ⁻¹ (rpm)	—	
	Valve clearance at 1 mm (0.04 in) (decompressor not applied)	1,100 kPa (11.22 kgf/cm ² , 160 psi) at 400 min ⁻¹ (rpm)	—	
Cylinder head warpage		—	0.10 (0.004)	
Valve, Valve guide	Valve clearance	IN	0.15 ± 0.02 (0.006 ± 0.001)	
		EX	0.20 ± 0.02 (0.008 ± 0.001)	
	Valve stem O.D.	IN	6.575–6.590 (0.2589–0.2594)	6.56 (0.258)
		EX	6.555–6.570 (0.2581–0.2587)	6.55 (0.258)
	Valve guide I.D.	IN/EX	6.600–6.615 (0.2598–0.2604)	6.655 (0.2620)
	Stem-to-guide clearance	IN	0.010–0.040 (0.0004–0.0016)	0.12 (0.005)
		EX	0.030–0.060 (0.0012–0.0024)	0.14 (0.006)
	Valve guide projection above cylinder head	IN	16.3–16.5 (0.64–0.65)	—
		EX	16.3–16.5 (0.64–0.65)	—
	Valve seat width	IN	1.1–1.3 (0.04–0.05)	2.0 (0.08)
EX		1.3–1.5 (0.05–0.06)	2.0 (0.08)	
Valve spring free length	Inner	IN/EX	44.0 (1.73)	
	Outer	IN/EX	45.2 (1.78)	
Rocker arm	Rocker arm I.D.	IN/EX	14.000–14.018 (0.5512–0.5519)	
	Rocker arm shaft O.D.	IN/EX	13.966–13.984 (0.5498–0.5506)	
	Rocker arm-to-shaft clearance	IN/EX	0.016–0.052 (0.0006–0.0020)	
Camshaft	Cam lobe height	IN	41.158–41.398 (1.6204–1.6298)	
		EX	41.196–41.436 (1.6219–1.6313)	
	Runout		0.03 (0.001)	